Amendments to the Claims

This Listing of Claims will replace all prior versions and listings of claims in the application.

Listing of Claims

Claim 1 (currently amended).

A nanocomposite, wherein said composite is formed of modified polyhedral oligomeric silsesquioxane (POSS) and polyimide through covalent bonding when the polyhedral oligomeric silsesquioxane connects to ends or side chains of the polyimide and forms self-assembled structure , and are a self-assembled system with low dielectric constant. and certain mechanical properties.

Claim 2 (currently amended).

The nanocomposite according to Claim 1, wherein the polyhedral oligomeric silsesquioxane is of reactive functional group, which is typically represented by chemical formula $(SiO_{1.5})_n R_{n-1} R'$, wherein n=6, 8, 10, 12, R is alkyl alkylene having 1 to 6 carbon atoms or phenyl phenylene, R' is $-R_1-B$; R_1 is alkyl having 1 to 6 carbon atoms or phenyl, and B is selected from group at least consisting of $-NH_2$, $-OH$, $-Cl$, $-Br$, $-I$, or and other derivatives having diamine group ($2NH_2$), for example, reactive functional groups as -R1-N(-Ar-NH2)2, -R1-O-Ar-CH(-Ar-NH2)2 and the like.

Claim 3 (currently amended).

The nanocomposite according to Claim 1, wherein the polyimide typically has polymerization units represented by following formula:
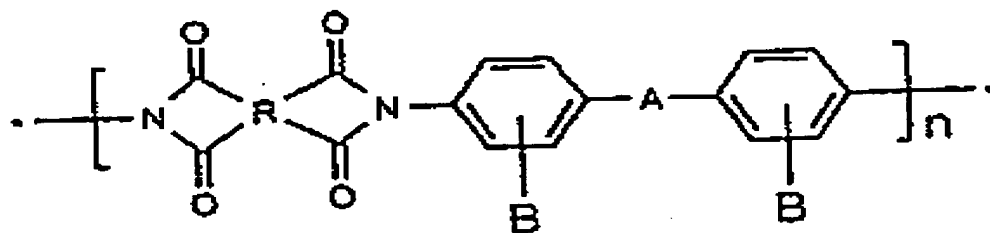
wherein R is
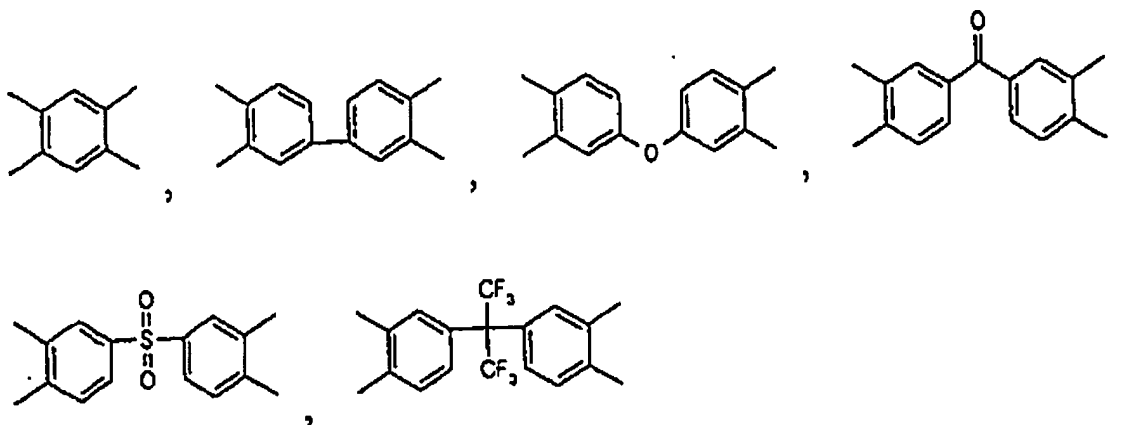
wherein A is -O-, -S-, -CH$_2$-, C(CH$_3$)$_2$, or C(CF$_3$)$_2$ ~~and the like~~; B is -H, -OH, or -NH$_2$.

Claim 4 (previously presented).

The nanocomposite according to Claim 1, wherein the dielectric constant of said composite is reduced to 2.3.

Claims 5 to 10 (cancelled).